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REMARKS

This application contains claims 1-8, 10, 11, 13-16, 20, 33, 35 and 46-69. Claim 13 has been amended. No new matter has been introduced. Reconsideration is respectfully requested.

Claim 13 has been amended to correct an informality. As this amendment will put the claim in better condition for allowance or appeal without changing the substance of the claim, Applicant requests that the Examiner enter the amendment notwithstanding the present final rejection.

Claims 1-8, 10, 11, 13-16, 20, 33, 35 and 46-54 and 56-69 were rejected under 35 U.S.C. 103(a) over Jungck (U.S. Patent 6,829,654) in view of Davies (U.S. Patent 6,901,053). Applicant respectfully traverses this rejection.

Jungck describes apparatus and methods for enhancing network infrastructure using edge servers and edge caches. The edge servers may also be used to detect malicious or otherwise unauthorized data transmissions (abstract). The edge server includes a request interceptor, a request filter and a request transmitter (col. 1, line 62 - col. 2, line 9). The edge server can also monitor data transmission generated by clients for malicious program code (col. 28, lines 51-57) and can identify the originating client in a DDOS attack (col. 29, lines 3-7).

Davies describes a priority routing service using an "express route" between network elements. Elements at each end of the express route divert packets transmitted between a certain user and a customer along the express route in order to avoid network bottlenecks (abstract). The express route comprises reserved or dedicated bandwidths on specific paths or connections (col. 3, lines 46-47). To determine the express routes, carrier nodes or elements where customer traffic is concentrated

are identified by analyzing typical traffic levels on various links within the network. The network elements at either end of the selected express route are modified to provide the desired traffic routing (col. 5, lines 43-56, cited by the Examiner). This express route technique allows a carrier to offer an enhanced service to particular customers for receiving and/or transmitting data traffic to or from any source or destination (col. 4, lines 62-65).

Claim 1 recites a method of responding to an overload condition, in which diversion of traffic by a first set of network elements is initiated in response to an indication of an anomalous traffic condition. The network elements in the first set divert traffic destined for a victim to a second set of network elements, which filter the diverted traffic and selectively pass a portion of the traffic to the victim.

In rejecting claim 1, the Examiner acknowledged that Jungck does not teach initiating diversion of traffic due to an indication of an anomalous traffic condition, but maintained that this teaching is supplied by Davies. Davies, however, teaches the diametric opposite of claim 1. "Anomalous" is used in claim 1, as well as in the specification of the present patent application, in accordance with its common, dictionary meaning: abnormal, or irregular (*Webster's Third New International Dictionary*). Davies, on the other hand, determines links for his express routes based explicitly on "typical traffic levels" (col. 5, lines 48-51), meaning the regular (*Webster's Third New International Dictionary*) or normal (*Webster's New World Dictionary*) traffic levels. Davies neither teaches nor suggests any use whatsoever for indications of anomalous traffic levels, let alone initiating diversion in response to such an indication. On the contrary, were Davies to base his express routes

on anomalous, rather than typical, traffic levels, the express routes would work poorly at best.

Thus, neither Jungck nor Davies can be taken to teach or suggest the step of initiating diversion of traffic responsively to an indication of an anomalous traffic condition, as recited in claim 1. Therefore, claim 1 is patentable over the cited art. In view of the patentability of claim 1, claims 2-8, 10, 11, 13-16, 20, 33, 35 and 53-55, which depend from claim 1, are also believed to be patentable.

Independent claim 46 recites a network element for use in protecting against an overload condition. The network element comprises an input, a filter for blocking traffic originating from a suspect source, a statistics module, and an output. The statistics module performs a statistical analysis of diverted traffic so as to detect an anomalous pattern of a flow associated with at least one source address. The filter blocks at least a portion of the data packets having such a source address.

In rejecting this claim, the Examiner acknowledged that Jungck does not teach a statistics module that detects an anomalous flow pattern, but again maintained that Davies supplies the missing teaching. As pointed out above in reference to claim 1, however, Davies is concerned solely with determining typical (i.e., normal, regular) traffic levels or distribution. He neither teaches nor suggests detecting anomalous (abnormal, irregular) flow patterns, as required by claim 46. Therefore, claim 46 is patentable over the cited art, as are claims 47 and 48, which depend from claim 46.

Independent claim 49 recites a system for use in protecting against an overload condition on a network. The system comprises one or more "guards," which comprise an input, a filter for selectively blocking traffic originating from a suspect source, a statistics module, and an output. One or more "diverters" selectively

initiate diversion to the guards of traffic otherwise destined for a victim responsively to detection of an anomalous traffic condition.

In rejecting this claim, the Examiner acknowledged that Jungck does not teach diversion of traffic due to an indication of an anomalous traffic condition, but again maintained that the missing teaching is supplied by Davies. As explained above in reference to claim 1, however, Davies diverts traffic based solely on typical traffic levels or distributions. He neither teaches nor suggests that diversion might be initiated in response to detection of an anomalous traffic condition, as required by claim 49. Therefore, claim 49 is patentable over the cited art, as are claims 50-52, which depend from claim 49.

Independent claim 56 recites a method of responding to an overload condition, which operates on similar principles to the network element recited in claim 46: A statistical analysis of diverted traffic is performed so as to detect an anomalous flow pattern associated with a source address, and at least a portion of the data packets having the source address is then prevented from reaching the victim. As explained above in reference to claim 46, neither Jungck nor Davies teaches or suggests this sort of statistical analysis. Therefore, claim 56 is patentable for the reasons explained above, as are claims 57-64, which depend from claim 56.

Independent claim 66 recites a method of responding to an overload condition at a victim network element. The victim is coupled to receive traffic from a network via a first port of a network switch. The network switch is actuated to divert the traffic destined for the victim to a second port, to which a guard machine is coupled. The guard machine filters the diverted traffic and selectively passes at least a portion of the filtered traffic to the victim.

The Examiner gave no reason for the rejection of claim 66, other than the blanket statement that this claim "contain[s] the same language of the claims already discussed above" and is "therefore... rejected under the same rationale" (page 9, fourth paragraph, in the Official Action). In fact, none of the claims discussed previously by the Examiner makes any reference at all to a network switch, let alone to the use of such a switch to divert traffic to a guard machine in the manner recited in claim 66. Neither Jungck nor Davies teaches or suggests using a network switch in this manner.

There is one other claim that recites the use of a network switch to route traffic destined for a victim to a second port for processing by another network element: dependent claim 55, which the Examiner found to recite allowable subject matter.

Thus, claim 66 is patentable over the cited art, as are claims 67-69, which depend from claim 66.

Dependent claim 55 was objected to for depending from a rejected base claim, but was deemed to recite allowable subject matter. Claim 55 depends from claim 2, which in turn depends from claim 1. In view of the patentability of claim 1, as explained above, Applicant believes that the objection to claim 55 should be withdrawn.

Notwithstanding the patentability of the independent claims, the remaining dependent claims in this application are also believed to recite independently-patentable subject matter. For the sake of brevity, however, Applicant will refrain from arguing the independent patentability of the dependent claims at present.

Applicant believes the amendments and remarks presented above to be fully responsive to all of the objections and grounds of rejection raised by the Examiner. In view of these amendments and remarks, all

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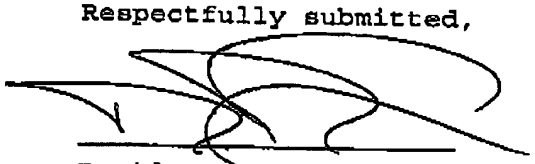
the claims in the present patent application are believed to be in condition for allowance. Prompt notice to this effect is requested.

Respectfully submitted,



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